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Harner et al.

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[54] **CONTROL SYSTEM FOR VARIABLE PITCH FAN PROPULSOR**

[75] Inventors: **Kermit I. Harner**, Windsor; **Roy W. Schneider**, Ellington, both of Conn.

[73] Assignee: **United Technologies Corporation**, Hartford, Conn.

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[52] **U.S. Cl.** ..... **416/28;** 416/29; 416/30; 60/39.16 R; 60/39.28 R; 60/226 A; 60/236; 60/239

[51] **Int. Cl.²**... **B63H 3/10;** F02C 9/02; B64C 11/44

[58] **Field of Search** ..... 60/226, 226 A, 262, 269, 60/39.25; 416/25, 29, 28, 27, 30; 244/53 B, 77 D

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Primary Examiner—Clarence R. Gordon

Attorney, Agent, or Firm—John D. Del Ponti

[57] **ABSTRACT**

A control for a variable pitch fan propulsor driven by a turbine type of power plant which fan is mounted in an engine bypass duct having a variable exit nozzle. The control serves to coordinate the control of fuel flow to the engine, the area of the fan exit nozzle, and the pitch of the fan blades by biasing the power lever position signal with Flight Mach No. An additional feature is the inclusion of fan surge control derived from signals of flight Mach No. and corrected free turbine speed.

11 Claims, 3 Drawing Figures